

REMARKS

Favorable reconsideration is respectfully requested in view of the foregoing amendments and following remarks.

Claims 39-40 are cancelled without prejudice, along with non-elected claims 30-35.

Claim 48 is rewritten so as to be dependent upon method claim 47.

The objection to claims 39-40 and 48 is thus deemed to be overcome.

Claims 46 and 47 have been rewritten in independent form.

The rejection of claims 46-47 under 35 USC 112, first paragraph, is thus deemed to be overcome.

Claims 36-41, 43, 45-47 and 49-53 are rejected under 35 USC 102 as being anticipated by Takino et al.

There are submitted herewith verified English translations of the two Japanese priority applications. The priority applications support the claimed subject matter under 35 USC 112. Since the priority applications have a filing date before the publication date of the reference, the reference is removed as prior art under 35 USC 119.

Claims 36-53 are rejected under 35 USC 103 as being obvious over Takino et al.

This ground of rejection is overcome for the reasons set forth above.

Lastly, claims 36, 41, 45, 46 and 53 are rejected under 35 USC 112, first paragraph, on the basis that the specification does not provide an adequate written description of a "partial

peptide or salt thereof comprising continuous antigenic amino acid residues of SEQ ID NO: 2 which are characteristic of said MMP protein". This ground of rejection is respectfully traversed.

As examples of such partial peptides, the following amino acid sequences of SEQ ID No: 2 are listed in the claims:

- | | | |
|-----|--|------------|
| (a) | Gly ¹⁰⁹ to Arg ¹¹⁹ | (Insert-1) |
| (b) | Pro ¹⁷¹ to Gly ¹⁷⁸ | (Insert-2) |
| (c) | Thr ²²⁹ to Leu ²⁴² | (Insert-3) |
| (d) | Asp ⁵³³ to Val ⁶⁰⁷ | (Insert-4) |

On pages 58-59, there are disclosed SEQ ID NOS: 6 and 7. SEQ ID NO: 6 fully includes but is larger than Insert 2. SEQ ID NO: 7 is unique from the Inserts 1-4.

The specification describes how one skilled in the art may identify partial peptides according to the claims. See page 33, the paragraph beginning at line 6. Such techniques are well known in the art, as mentioned on page 31, the paragraph beginning on line 8.

Accordingly, the specification does provide a written description of 6 partial peptide sequences according to the claims. These examples provide adequate written support for this aspect of the claimed invention, particularly since one of ordinary skill in the art would be capable of easily identifying other partial peptides without undue experimentation, taking into consideration the teachings of the specification and the knowledge in the art.

Thus, it is respectfully submitted that the claims as amended overcome each ground of rejection, and favorable reconsideration and allowance is solicited.

Respectfully submitted,

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VERSION SHOWING MARKED UP CHANGES TO THE CLAIMS

Claim 36. (Amended) An isolated antibody which specifically binds [against] to a matrix metalloproteinase (MMP) protein or a salt of said MMP protein, or a partial peptide of said MMP protein or a salt of said partial peptide, said matrix metalloproteinase protein or salt thereof comprising the following peptide fragments of SEQ ID No: 2: (a) Gly¹⁰⁹ to Arg¹¹⁹, (b) Pro¹⁷¹ to Gly¹⁷⁸, (c) Thr²²⁹ to Leu²⁴² and (d) Asp⁵³³ to Val⁶⁰⁷, said matrix metalloproteinase protein having a maximum molecular weight of approximately 69kDa and is a pro MMP-2 activating factor, said partial peptide or salt thereof comprising continuous antigenic amino acid residues of SEQ ID No: 2 which are characteristic of said MMP protein.

Claim 41. (Amended) The antibody according to claim 36, wherein the antibody specifically binds [against] to said partial peptide or salt thereof.

Claim 45. (Amended) A method for producing an antibody [according to claim 36, said method comprising] , which comprises:

immunizing an animal with [employing] an antigen selected from the group consisting of [said] a matrix metalloproteinase (MMP) protein [, said] or a salt of said MMP protein, or a [said] partial peptide of said MMP protein or a [and said] salt of said partial peptide, [to produce the antibody thereagainst] said matrix metalloproteinase protein or salt thereof comprising the following peptide fragments of SEQ ID No: 2: (a) Gly¹⁰⁹ to Arg¹¹⁹, (b) Pro¹⁷¹ to Gly¹⁷⁸, (c) Thr²²⁹ to Leu²⁴² and (d) Asp⁵³³ to Val⁶⁰⁷, said matrix metalloproteinase protein having a maximum molecular weight of approximately 69kDa and is a pro MMP-2 activating factor, said partial

peptide or salt thereof comprising continuous antigenic amino acid residues of SEQ ID No: 2 which are characteristic of said MMP protein, and

isolating an antibody which specifically binds to said antigen.

Claim 46. (Amended) A method for producing an antibody [according to claim 43, said method comprising] , which comprises:

immunizing an animal with an antigen selected from the group consisting of [said] a matrix metalloproteinase (MMP) protein or a [said] salt of said MMP protein, or a [said] partial peptide of said MMP protein or a [and said] salt of said partial peptide, said matrix metalloproteinase protein or salt thereof comprising the following peptide fragments of SEQ ID No: 2: (a) Gly¹⁰⁹ to Arg¹¹⁹, (b) Pro¹⁷¹ to Gly¹⁷⁸, (c) Thr²²⁹ to Leu²⁴² and (d) Asp⁵³³ to Val⁶⁰⁷, said matrix metalloproteinase protein having a maximum molecular weight of approximately 69kDa and is a pro MMP-2 activating factor, said partial peptide or salt thereof comprising continuous antigenic amino acid residues of SEQ ID No: 2 which are characteristic of said MMP protein, to obtain an antibody-producing cell which produces an antibody which specifically binds to said antigen,

fusing said antibody-producing cell with an immortal cell, and

selecting an immortal hybrid cell which produces a monoclonal antibody [according to claim 43] which specifically binds to said antigen.

Claim 47. (Amended) A method for detecting and/or measuring a matrix metalloproteinase protein [, said method comprising using the antibody according to claim 36] or salt thereof, which comprises:

contacting a test sample with an antibody which specifically binds to a matrix metalloproteinase (MMP) protein or a salt of said MMP protein, or a partial peptide of said MMP protein or a salt of said partial peptide, said matrix metalloproteinase protein or salt thereof comprising the following peptide fragments of SEQ ID No: 2: (a) Gly¹⁰⁹ to Arg¹¹⁹, (b) Pro¹⁷¹ to Gly¹⁷⁸, (c) Thr²²⁹ to Leu²⁴² and (d) Asp⁵³³ to Val⁶⁰⁷, said matrix metalloproteinase protein having a maximum molecular weight of approximately 69kDa and is a pro MMP-2 activating factor, said partial peptide or salt thereof comprising continuous antigenic amino acid residues of SEQ ID No: 2 which are characteristic of said MMP protein, and
detecting and/or measuring the matrix metalloproteinase protein or salt thereof bound to the antibody.

Claim 48. (Amended) The [antibody according to claim 44, wherein the antibody is used for detecting and/or measuring said matrix metalloproteinase protein or salt thereof] method according to claim 47, wherein the antibody is labelled.